PTO/SB/08A (10-96)

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

MAR 01 2002 PATENT & TRADEMARK OFFICE

Sheet		of	5

Complete if Known	
Application Number	09/880,711
Filing Date	June 12, 2001
First Named Inventor	Abuin
Group Art Unit	1642
Examiner Name	To be assigned
Attorney Docket Number	LEX-0191-USA

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	4,190,496		Rubenstein et al	02/26/80	
	AB	4,215,051		Schroeder et al	07/29/80	
	AC	4,376,110		David et al	03/08/83	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,683,202		Mullis	07/28/87	
	AF	4,689,405		Frank et al	08/25/87	
	AG	4,713,326		Dattagupta et al	12/15/87	
	AH	4,873,191		Wagner et al	10/10/89	
	AI	4,946,778		Ladner et al	08/07/90	
	AJ	5,143,854		Pirrung et al	09/01/92	
	AK	5,252,743		Barrett et al	10/12/93	
	AL	5,270,170		Schatz et al	12/14/93	
	AM	5,405,783		Pirrung et al	04/11/95	
	AN	5,424,186		Fodor et al	06/13/95	
	AO	5,432,018		Dower et al	07/11/95	
	AP	5,445,934		Fodor et al	08/29/95	
	AQ	5,464,764		Capecchi et al	11/07/95	
	AR	5,556,752		Lockhart et al	09/17/96	
	AS	5,700,637		Southern	12/23/97	
	AT	5,744,305		Fodor et al	04/28/98	
	AU	5,877,397		Lonberg et al.	03/02/99	
	AV	6,075,181		Kucherlapati et al.	06/13/00	
	AW	6,080,576		Zambrowicz et al.	06/27/00	
	AX	6,136,566		Sands et al.	10/24/00	
	AY	6,139,833		Burgess et al.	10/31/00	

RECEIVED

MAR 0 5 2002

TECH CENTER 1600/2900

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	AZ	WO	88/04300	A1	University Patents Inc.	06/16/88		
	BA	WO	88/09810	A1	Synthetic Genetics	12/15/88		
	BB	WO	90/11364	A1	University Patents Inc.	10/04/90		

Examiner Signature	Deborah Crouch	Date Considered	2/18/04

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/08B (10-96)

Please type a plus sign (+) inside this box → □

Approved for use through 10/31/99. OMB 0651-0031

Pat d Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of | 5

Complete if Known	
Application Number	09/880,711
Filing Dat	June 12, 2001
First Named Invent r	Abuin
Group Art Unit	1642
Examiner Name	To be assigned
Attorney Docket Number	LEX-0191-USA

MAR 0 1 2002 PAT & TRADEMARK OFFICE

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
dl	BC	Askew et al, 1989, "Molecular Recognition with Convergent Functional Groups, 6. Synthetic and Structural Studies with a Model Receptor for Nucleic Acid Components", J. Am. Chem. Soc. 111:1082-1090.	
	BD	Been et al, 1986, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans-Splicing, and RNA Enzyme Activity", Cell 47:207-216.	
	BE	Benoist et al, 1981, "In vivo sequence requirements of the SV40 early promoter region", Nature 290:304-310.	
	BF	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.	
	BG	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.	
	BH	Brinster et al, 1982, "Regulation of metallothionein-thymidine kinase fusion plasmids injected into mouse eggs", Nature 296:39-41.	
	BI	Brisson et al, 1984, "Expression of a bacterial gene in plants by using a viral vector", Nature 310:511-514.	
	BJ	Broglie et al, 1984, "Light-Regulated Expression of a Pea Ribulose-1,5-Bisphosphate Carboxylase Small Subunit Gene in Transformed Plant Cells", Science 224: 838-843.	
	BK	Butler, 1981, "The Amplified ELISA: Principles of and Applications for the Comparative Quantitation of Class and Subclass Antibodies and the Distribution of Antibodies and Antigens in Biochemical Separates," Methods of Enzymology, 73:482-523	
	BL	Chien et al, 1991, "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest", Proc. Natl. Acad. Sci. USA 88:9578-9582.	
	BM	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14.	
	BN	Coruzzi et al, 1984, "Tissue-specific and light-regulated expression of a pea nuclear gene encoding the small subunit of ribulose-1,5-bisphosphate carboxylase", EMBO Journal 3(8):1671-1679.	
	BO	Frohman, 1994, "On Beyond Classic RACE (Rapid Amplification of cDNA Ends)," PCR Methods and Applications 4:S40-S58.	
	BP	Gautier et al, 1987, "α-DNA IV:α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physiochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641.	
	BQ	Gordon, 1989, "Transgenic Animals," International Review of Cytology, 115:171-229.	
	BR	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.	
	BS	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.	
	BT	Gurley et al, 1986, "Upstream Sequences Required for Efficient Expression of a Soybean Heat Shock Gene", Mol. & Cell. Biology 6(2):559-565.	
dl	BU	Haseloff et al, 1988, "Simple RNA enzymes iwth new and highly specific endoribonuclease activities," Nature, 334:585-591.	

RECEIVED

MAR 0 5 2002

TECH CENTER 1600/2900

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 5

Complete if Known	
Application Number	09/880,711
Filing Date	June 12, 2001
First Named Inventor	Abuin
Group Art Unit	1642
Examiner Name	To be assigned
Attorney Docket Number	LEX-0191-USA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	BV	Helene, 1991, "The anti-gene strategy: control of gene expression by triplex-forming-oligonucleotides", Anti-Cancer Drug Design 6:569-584.	
	BW	Helene et al, 1992, "Control of Gene Expression by Triple Helix-Forming Oligonucleotides", Annals N.Y. Acad. Sciences 660:27-36.	
	BX	Houghten et al, 1991, "Generation and use of synthetic peptide combinatorial libraries for basic research and drug discovery", Nature 354:84-86.	
	BY	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.	
	BZ	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.	
	CA	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330.	
	CB	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149.	
	CC	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110.	
	CD	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497.	
	CE	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236.	
	CF	Lam et al, 1991, "A new type of synthetic peptide library for identifying ligand-binding activity", Nature 354:82-84.	
	CG	Lavitrano et al, 1989, "Sperm Cells as Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723.	
	CH	Lemaitre et al, 1987, "Specific antiviral activity of a poly(L-lysine)-conjugated oligodeoxyribonucleotide sequence complementary to vesicular stomatitus virus N protein mRNA initiation site", Proc. Natl. Acad. Sci. USA 84:648-652.	
	CI	Letsinger et al, 1989, "Cholesteryl-conjugated oligonucleotides: Synthesis, properties, and activity as inhibitors of replication of human immunodeficiency virus in cell culture", Proc. Natl. Acad. Sci. USA 86:6553-6556.	
	CJ	Lewis et al., 1989, "Automated site-directed drug design: the concept of spacer skeletons for primary structure generation," Proc. R. Soc. Lond. B 236:125-140.	
	CK	Lewis et al, 1989, "Automated site-directed drug design: the formation of molecular templates in primary structure generation", Proc. R. Soc. Lond. B 236:141-162.	
	CL	Lo, 1983, "Transformation by Iontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814.	
	CM	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659.	
	CN	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823.	
	CO	Maher, 1992, "DNA Triple-Helix Formation: An Appraoch to Artificial Gene Repressors?, BioEssays, 14(12):807-815.	

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Please type a plus sign (+) inside this box → □

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of | 5

Complete if Known	
Application Number	09/880,711
Filing Date	June 12 2001
First Named Inventor	Abuin
Group Art Unit	1642
Examiner Name	To be assigned
Attorney Docket Number	LEX-0191-USA

MAR 01 2002 PATENT & TRADEMARK OFFICE

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CP	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855.	
	CQ	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076.	
	CR	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608.	
	CS	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438.	
	CT	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531.	
	CU	Platt et al, 1994, "Independent Regulation of Adipose Tissue-specificity and Obesity Respnose of the Adipsin Promoter in Transgenic Mice," The Journal of Biological Chemistry, 269(46)28558-28562.	
	CV	Ripka, 1988, "Computers picture the perfect drug", New Scientist 16:54-57.	
	CW	Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794.	
	CX	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156.	
	CY	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451.	
	CZ	Sarver et al, 1990, "Ribozymes as Potential Anti-HIV-1 Therapeutic Agents", Science 247:1222-1225.	
	DA	Shilo et al, 1981, "DNA sequences homologous to vertebrate oncogenes are conserved in Drosophila melanogaster", Proc. Natl. Acad. Sci. USA 78(11):6789-6792.	
	DB	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593.	
	DC	Smithies, 1985, "Insertion of DNA sequences into the human chromosomal β-globin locus by homologous recombination", Nature 317:230-234.	
	DD	Songyang et al, 1993, "SH2 Domains Recognize Specific Phosphopeptide Sequences", Cell 72:767-778.	
	DE	Stein et al, 1988, "Physiochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221.	
	DF	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034.	
	DG	Takamatsu et al, 1987, "Expression of bacterial chloramphenicol acetyltransferase gene in tobacco plants mediated by TMV-RNA", EMBO Journal 6(2):307-311.	
	DH	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454.	
	DI	Thomas et al, 1987, "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells", Cell 51:503-512.	

RECEIVED
MAR 0 5 2002
TECH CENTER 1600/2900

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 5

Complete if Known	
Application Number	09/880,711
Filing Date	June 12, 2001
First Named Inventor	Abuin
Group Art Unit	1642
Examiner Name	To be assigned
Attorney Docket Number	LEX-0191-USA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	DJ	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321.	
	DK	Van Der Krol et al.,1988, "Modulation of Eukaryotic Gene Expression by Complementary RNA or DNA Sequences," BioTechniques, 6(10)958-976.	
	DL	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152.	
	DM	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509.	
	DN	Voller et al, 1978, "Enzyme immunoassays with special reference to ELISA techniques", J. Clinical Pathology 31:507-520.	
	DO	Wagner et al, 1981, "Nucleotide sequence of the thymidine kinase gene of herpes simplex virus type 1", Proc. Natl. Acad. Sci. USA 78(3):1441-1445.	
	DP	Wagner, 1994, "Gene inhibition using antisense oligodeoxynucleotides", Nature 372:333-335.	
	DQ	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546.	
	DR	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570.	
	DS	Wigler et al., 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells," Cell 11:223-232.	
	DT	Yamamoto et al, 1980, "Identification of a Functional Promoter in the Long Terminal Repeat of Rous Sarcoma Virus", Cell 22:787-797.	
	DU	Zaug et al, 1984, "A Labile Phosphodiester Bond at the Ligation Junction in a Circular Intervening Sequence RNA", Science 224:574-578.	
	DV	Zaug et al, 1986, "The Tetrahymena ribozyme acts like an RNA restriction endonuclease", Nature 324:429-433.	
	DW	Zaug & Cech, 1986, "The Intervening Sequence RNA of Tetrahymena is an Enzyme", Science 231:470-475.	

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.